

# **Tender document**

**Open tendering competition of the Public  
Procurement Act and the Regulations relating to  
public procurement part I and III**

for

**Consultancy Services for In-House Engineering Services  
and Feasibility Studies for Department of Hydropower  
Implementation, Ministry of Electric Power, Nay Pyi Taw,  
Myanmar**

Reference number:

**32131**

Submission date :

03.10.2014

kl. 12:00

Contract period:

15.10.2014 – 01.10.2016

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# 1 GENERAL DESCRIPTION

## 1.1 *Client*

The Norwegian Water Resources and Energy Directorate (NVE) is a directorate under the Ministry of Petroleum and Energy. NVE's mandate is to ensure an integrated and environmentally sound management of Norway's water resources, promote efficient energy markets and cost-effective energy systems and contribute to efficient energy use.

For more information about NVE, visit our website [www.nve.no](http://www.nve.no)

## 1.2 *Scope of procurement*

The Norwegian Water Resources and Energy Directorate (NVE) has the pleasure to invite interested consultancy firms to submit technical and financial proposals for consultancy services for In-House Engineering Services and Feasibility Studies for Department of Hydropower Implementation, Ministry of Electric Power, Nay Pyi Taw, Myanmar

The Ministry of Electric Power (MoEP), Myanmar and the Norwegian Water Resources and Energy Directorate (NVE) have embarked on a program of Technical Assistance funded by the Ministry of Foreign Affairs of Norway. The Technical Assistance Program is based on a Program Document for the said Technical Assistance and a Memorandum of Understanding between MOEP and NVE signed in March 2014. A contract has been entered into between the Royal Norwegian Embassy in Yangon and NVE, under which the areas of technical assistance program will be carried out.

The Technical Assistance program includes provisions to provide in-house consultants to the Department of Hydropower Implementation under the Ministry of Electric Power (hereinafter called "the DHPI" and MOEP, or collectively, "the Client"). Furthermore, a review and update of previous feasibility studies and the carrying out of environmental and social impact assessments for two hydropower projects which will be implemented by the Department of Hydro Power Implementation is also included.

MOEP has long recognised the achievements of Norway in the field of Hydropower Development and wishes to draw upon and build on the expertise available in this respect in order to bring MOEP design and implementation practises up to modern international standards.

The full description of the Assignment is given in the enclosed Terms of Reference (TOR).

The FIDIC standard contract will apply for the assignment. The contract will be a contract where work is payable after elapsed time and work (??)

### **1.3 Partial Tenders**

Partial tenders will not be accepted  
Tenders for part of the agreement will not be considered.

### **1.4 Period of contract**

The services shall be carried out from 15.10.2014 – 01.10.2016 (tentatively).

### **1.5 Tender Document**

The Tender documents comprise of this document and the following:

- Annex 1 ToR
- Annex 2 Contract format
- Annex 3 HSE self declaration form
- Annex 4 Self declaration of salary and working conditions
- Annex 5 CV Format
- Annex 6 Financial Proposal Form

### **1.6 Announcement**

The competition is announced in the Merzell-database, DOFFIN-database and in the TED-database.

### **1.7 Time schedule**

The Client has set forth a preliminary time schedule for the process:

Activity	Time
Announcement in Merzell/DOFFIN/TED	18.08.2014
Submission deadline	03.10.2014 kl.12:00
Opening of bids	Week 40
Duration of tenders commitment	3 months after submission dead line
Evaluation	Week 40-42
Selection of bid and information to bidders	Week 42
Deadline for filing complaints	10 days after selection of successful bidder
Signing of contract	Week 43

Dates after submission are tentative.

## **2 Competition Rules**

### **2.1 Procedure**

Open tendering competition, cf the Norwegian Public Procurement Act of 16 July 1999 No. 69 as amended, see also the Regulations relating to public procurement, laid down by Royal Decree on 7 April 2006 No 402. This type of procedure does not allow for contract negotiations. Only bidders that fulfil the qualification requirements will have their tenders evaluated. Bidders are not allowed to change any parts of the tender after the submission deadline.

### **2.2 Secrecy**

The Client shall treat all bids and their contents in line with the Norwegian Public Administration Act § 13 and Royal Decree on 7 April 2006 No 402, concerning secrecy.

### **2.3 Reservations and non-conformity**

If the supplier has reservations regarding parts of the tender documentation, required specifications, contract or other tender documents, it shall be clearly stated in the bid. Any reservations must be specified, including consequences they will or might have for performance, prices or other conditions.

The same applies to non-conformity. Reservations and non-conformities shall be stated precisely and unambiguously. They shall be stated in the bid letter in such a manner that the contractor can evaluate them without it being necessary to contact the supplier, cf. Section 20-3 of the Public Procurement Act. Substantial reservations, and reservations or non-conformities that can result in uncertainty regarding evaluation of the bid compared to other bids, will result in the bid being disallowed, cf. Section 20-13(1) of The Public Procurement Act.

If the supplier's reference to standardized terms of delivery, or something similar, deviates from existing tender or contract provisions, it will be regarded as a reservation.

### **2.4 Duty of information**



The Client shall give written notice if a bid is rejected or all bids are rejected and the competition is cancelled.

### **2.5 Confirmation of interest**

Follow guidance given in the Merccell-database

### **2.6 Communication during the tender process**

All communication during the process shall be routed via the Merccell-portal, [www.merccell.no](http://www.merccell.no). This is to assure that all communication will be logged. When you

are logged on to the competition, chose the flag marked “Communication”, click on the symbol  “New message”. Enter the information to the authority and then click send . The authority will then receive your message. If the question regards all bidders, the authority will answer the inquiry anonymously by giving the answer as additional information. Additional information is available under the flag “Enquiry”, then the flag “Additional information”. You will also receive an e-mail with a link to the additional information.

Requests received later than 10 working days prior to the deadline for the offer will not be answered.

## ***2.7 Supplements or changes to the tender documentation***

The Client reserves the right to supplement or change the tender documentation before the deadline for presenting tenders. If the changes are of a nature materially changing the scope of work or other important aspects, an extension of deadline will be announced.

Any changes in the tender documentation will be published in the Merccell-database. The changes will take precedence over previous versions of the tender documentation.

If the supplier becomes aware of lack of information or ambiguities in the tender document that may affect the implementation of the assignment, pricing etc., the Client shall be made aware of this immediately.

## ***2.8 Sub-contractors***

There shall be one main contractor responsible for the assignment.

The main contractor may use sub-contractors for parts of the assignment. In such case, the tender shall include information regarding which sub-contractors will be used for which parts of the work.

If the Consultant intends to sub-contract any part of the assignment, the Client will require documentation of the agreement, either in the form of a signed letter of intent, or a copy of a signed contract between the Consultant and any sub-contractor. The main contractor is fully responsible to the Client for the sub-contractors engaged and for committing them contractually to fulfil the requirements in the standard agreement.

### **3 Qualification requirements**

#### **Personal situation of economic operators, including requirements relating to enrolment on professional or trade registers**

Information and formalities necessary for evaluating if the requirements are met:

It is required that the supplier fulfils its obligations with respect to payment of taxes and value added taxes.

Required documentation from government agencies

The following documents must be included together with the offer:

Tax return certificate issued by the tax authorities in the company's country of origin with proof that the company's organization fulfils its obligations with respect to tax return and social security if applicable, or otherwise can certify compliance to the local taxation rules of the bidder's country of origin. The certificate shall not be older than 6 months.

This tax return certificate may also include verification of paid value added taxes (VAT) according to local regulations. The certificate shall not be older than 6 months.

#### Statement on Environment, Health and Safety (EHS)

A signed statement on Environment, Health and Safety must be included with the offer. The certificate shall not be older than 6 months.

#### Enrolment in professional or trade register

The supplier shall be a legally registered firm

Norwegian companies: Firmaattest

Foreign companies: documentation that the company is registered in a professional or trade register as required by law in the country where the company is legally established.

#### **Economic and financial ability**

Information and formalities necessary for evaluating if the requirements are met:

The supplier must have the economic capacity to carry out the assignment/contract.

Documentation requirement: Annual Accounts, including the board's annual report and auditor's statement.

## Technical capacity

Information and formalities necessary for evaluating if the requirements are met:

A good and well-functioning quality assurance system is required for the services that will be provided.

Statement regarding the supplier's quality assurance system/management system.

## 4 Award criteria

Criteria	Weight	Documentation requirements
Financial proposal	10 %	<p>Complete Financial proposal shall include:</p> <ul style="list-style-type: none"><li>• Fee rates of all personnel</li><li>• Specified budget for all travel and other related expenses (travels, per diems, equipment etc). The budget shall include an amount of 10% for unforeseen expenses (Physical Contingency).</li><li>• Financial Proposals shall be denominated in NOK</li></ul>
Technical proposal	90 %	<p>The Technical Proposal shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"><li>• Comments on TOR (Maximum 3 A4-pages further pages will not be considered in the evaluation)</li><li>• Methodology, workplan, time schedule, capacity building of MLME staff (Maximum 20 A4 pages further pages will not be considered in the evaluation )</li><li>• List of personnel with input (man-months) and role in the assignment. (Maximum 5 pages further pages will not be considered in the evaluation)</li><li>• CVs of all personnel (signed by the person of the CV or person responsible for the proposal). Each assignment listed shall include role and duration in man-months. (Maximum CV length strictly 3 A4-pages only-further pages will not be considered in the evaluation)</li></ul>



The technical score will be based on the following weighting:

Sub-criteria	Weight
The Firm's, and subcontracted firms/institutions, relevant experience and Back-stopping ability	7,5
The Firm's, and subcontracted firms/institutions, record on previously projects of a similar nature (see requirements below)*	7,5
Quality, content and suitability of the Technical Transfer Program	30
Consultants personell	35
Methodology and Work Plan	20

\* The supplier shall have experience from a minimum of 5 equivalent contracts.

Documentation requirement: The supplier shall attach a list of the most important relevant deliveries during the last 10 years, hereunder information about the value, time and person months supplied by the firm and contracting authority.

Brief presentation of the background, experience, capability and capacity of the firm and any sub-consultants with respect to relevant similar assignments. (Maximum 15 pages further pages will not be considered in the evaluation – Annual Reports may be appended in addition.)

Reference assignments (max 15 assignments and max. one A4-page for each assignment further pages will not be considered in the evaluation)  
 Presentation of the firm and firms/institutions to be subcontracted, with latest annual report (Maximum 5 pages further pages will not be considered in the evaluation).

Firms will be ranked using a combined technical/financial score, giving 90 % weight (T) on the Technical Proposal and 10 % weight (F) on the Financial Proposal. The lowest Financial Proposal (Fm) will be given a financial score (Sf) of 100 points. The financial scores of the Proposals will be computed as follows:  $S_f = 100 \times F_m / F$ . (F = amount of Financial Proposal converted in the common currency, NOK). Proposals will finally be ranked according to their combined technical (St) and financial (Sf) scores using the weightings indicated herein:  $S = S_t \times T\% + S_f \times F\%$

The Proposals will be evaluated by an evaluation committee headed by NVE.

## **5 Evaluation and selection**

### **5.1 *Opening of bids***

The opening of bids will not be public.

### **5.2 *Right to reject all bids***

The Client reserves the right to reject all tenders and is under no obligation to enter into a contract for the services.

### **5.3 *Information and reasons for decisions***

When the Client has selected a successful bid, all suppliers will be informed in writing, before signing of contract.

The Client will provide a 10 days window for filing complaints concerning the decision to award the contract.

Following evaluation of proposals, which is expected to take 1 week, and the 10 day window for filing complaints, the selected bidder will be invited to contract meetings – which will take place at the offices of NVE in Oslo. During the contract meetings the Consultant will be required to confirm the validity of his bid, staff availability and other key issues. A FIDIC model lump-sum contract will be drawn up with a payment schedule up to the total contract amount (excluding Physical Contingencies) based on key project milestones.

## 6 Submission of Tender

All tenders shall be submitted electronically via the Mercell portal, [www.mercell.no](http://www.mercell.no) by the tender deadline. Tenders delivered after the deadline will not be accepted. (The system does not permit tenders to be sent electronically via Mercell after the tender deadline.)

If you are not a Mercell customer, or you have questions regarding how the application functions, e.g. how to submit a tender, please contact Mercell Support at tel +47 21 01 88 60, or by e-mail to [support@mercell.com](mailto:support@mercell.com). It is recommended to submit the tender in adequate time before the deadline. A minimum of 3 hours before the deadline is suggested.

If the authority should provide additional information that results in you wanting to change your tender before the deadline, you can access your offer, open it, make the necessary changes and send it again right up to the deadline. The last submitted tender will be regarded as the final one.

The tender shall be:

1. In writing and contain a cover letter which is signed and dated.
2. With documents in English

The cover letter shall contain:

- Reference to case number
- The Suppliers address, telephone og company registration number
- The Suppliers contact person with telephone number and e-mail address
- Any reservations shall be expressed clearly and give reference to the specific places in the bid (page number and heading)
- The Bid shall be dated and signed by a person(s) who have the competence to commit the supplier.

The following documents shall accompany the cover letter:

1. Tax- documentation
2. HSE-self declaration form
3. Documents providing information on the legal status of the Supplier
4. Other documents to show the fulfilment of qualification criteria
5. Self declaration form on salary and working conditions
6. Fulfilment of TOR and award criteria
7. Agreement or other relevant documentation for use of sub-contractors see 2.8.
8. Completed financial proposal
9. Completed CVs in the provided format.

The supplier is responsible for answering all questions and for seeing to that all criteria are answered and/or reviewed.

# Annex 1 – Terms of Reference

## ***Terms of Reference*** **Consultancy Services for In-House Engineering Services and Feasibility Studies for Department of Hydropower Implementation, Ministry of Electric Power, Nay Pyi Taw, Myanmar**

### **Introduction**

#### **Background**

The Ministry of Electric Power (MoEP), Myanmar and the Norwegian Water Resources and Energy Directorate (NVE) have embarked on a program of Technical Assistance funded by the Ministry of Foreign Affairs of Norway. The Technical Assistance Program is based on a Program Document for the said Technical Assistance and a Memorandum of Understanding between MOEP and NVE signed in March 2014. A contract has been entered into between the Royal Norwegian Embassy in Yangon and NVE, under which the areas of technical assistance program will be carried out.

The Technical Assistance program includes provisions to provide in-house consultants to the Department of Hydropower Implementation under the Ministry of Electric Power (hereinafter called "the DHPI" and MOEP, or collectively, "the Client"). Furthermore, a review and update of previous feasibility studies and the carrying out of environmental and social impact assessments for two hydropower projects which will be implemented by the Department of Hydro Power Implementation is also included.

MOEP has long recognised the achievements of Norway in the field of Hydropower Development and wishes to draw upon and build on the expertise available in this respect in order to bring MOEP design and implementation practises up to modern international standards.

This Terms of Reference describes the required consultancy services within the above setting.

#### **In-House Consultancy**

The Consultant shall propose a team of in-house consultants who will work with MOEP engineers in Myanmar on the various tasks as described in the Scope of Work. Most of the in-house consultancy work will be carried out through long and short term stationing of the Consultants experts in Myanmar to work together with MOEP engineers. Notwithstanding this, some home office work may also be required, especially in respect to specialist expert advisory services and in connection with technical transfer to the MOEP engineers.

#### **Feasibility Studies**

MOEP is responsible for studying specific hydropower projects and to bring these forward for investment decision and implementation, including up-to-date environmental and social impacts assessment. MOEP needs to develop their project assessment capacity and requires assistance in performing feasibility studies and environmental/social impact assessments for hydropower projects currently in the planning stage which are to be brought up to current recognised international standards.

The feasibility studies projects shall be carried out according to international best practise (IFC, WB or ADB) by international consultants and with MOEP as counterpart staff to transfer knowledge and experience.

The individual projects will be identified by MOEP during the course of the assignment.

#### **Technical Transfer**

DHPI under MOEP is responsible for implementation of hydropower projects and is in need of strengthening its capacity in feasibility studies (including environmental and social aspects), detailed design for bidding, construction design and construction supervision.

Technical transfer from the Consultant to DHPI engineers and experts is therefore a core activity of the consulting services and the Consultant shall demonstrate and document that this is achieved in accordance to requirements from the donors. Documentation of achieved Technical Transfer shall therefore, as a minimum, be prepared as follows:

- Detailed Technical Transfer Plan to be elaborated by the Consultant showing planned training activities, number of trainings to be provided / number of people (men, women) to be trained by the contracted consultants as part of their assignment;
- Standard training evaluation form to be used for trainees to complete at end of each training. Average scores to be calculated.
- Elaboration and submission of quarterly Progress Reports on the Technical Transfer Plan by the Consultant including the results of the trainee evaluations including average score for relevance and quality of training, and any changes to the Technical Transfer Plan. All reported data shall be gender disaggregated and reported separately for women and men.

The above requirements shall be applied to all technical transfer under the assignment.

Furthermore, it is expected that the DHPI engineers and experts shall be actively engaged by the Consultants in both Myanmar and in the Consultant's Home Office in Norway. MOEP counterparts shall be brought to work in the Consultant's Home Office for periods of time for work on the project details under the instruction and guidance of the Consultant. This shall be in addition to active engagement of the MOEP counterparts on the project work in Myanmar under the guidance of the Consultant's experts in Myanmar. In the evaluation of the proposals, particular emphasis will be placed on the adequacy and excellence of the program of technical transfer proposed by the Consultant.

## **Scope of Services**

### **In-House Consulting Services**

In-house Engineering Consulting Services are required for Design and Construction advisory Services of the implementation of the hydropower projects. The Services will be commensurate with the expatriates actually provided by the Consultant within the periods of engagements agreed with the DHPI of MOEP (I) and the Consultant according to the ongoing hydropower projects, namely: the ongoing Tha-htay Hydropower Project and the ongoing Upper Keng Tawng Hydropower Project (both currently under construction), in addition to advice on one additional planning project (at feasibility level stage), hereinafter called "the Projects".

### **Scope of Work for In-House Consultants:**

The Scope of Work will include the following items: Feasibility Study, Detailed Design for Bidding, Construction Design, Construction Supervision, Technical Transfer, Coordination Meetings, Technical Steering Committee Program, and Reporting.

Further scope may be incorporated during the course of the services as requested by MOEP/DHPI.

The scope of the Service is further detailed in the following, and will be according to the development phase of the Projects:

### **In-House Consulting Advisory Services for Feasibility Studies:**

Advisory services in preparation of Feasibility Studies to be made by the DHPI including technical transfer to DHPI staff, including engineering and environmental and social aspects related to feasibility studies. The in-house advisory services will include:

- a) To identify important issues which require further investigation and/or studies for feasibility grade design of the Projects.
- b) To prepare comprehensive program for feasibility studies (F/S) and investigations covering topography, hydrology, geology, seismicity, construction materials, environmental and social impact assessment.
- c) To assist the DHPI in the supervision of site investigation and evaluation of all studies and test results.

- d) To assist the DHPI in preparation of feasibility grade design and appraisal of projects.
- e) To support the DHPI to prepare F /S reports through training.
- f) To provide technical transfer to the DHPI engineers.

#### **In-House Consulting Advisory Services for Detailed Design for Bidding**

Advisory services in preparation of bid design, specifications and bid documents to be made by the DHPI including technical transfer to DHPI staff. The in-house advisory services will include:

- a) To advise and assist upon on-going site investigation and evaluation of their findings.
- b) To assist the DHPI in plan, model making, execution, evaluation, and reporting for a hydraulic model test, if the hydraulic model test is necessary for the design of hydraulic structures such as spillways, intakes.
- c) To assist the DHPI in preparation of basic and detailed designs for bidding including calculations with software and design manuals, etc.
- d) To assist the DHPI in preparation of bid documents for hydraulic steel structures, and electro-mechanical equipment including switchyard equipment.
- e) In the case that international bidding is planned for key aspect of the civil works, the Consultant will provide advice on the DHPI's preparation of such specifications and Bill of Quantities.
- f) To assist the DHPI in preparation of design and construction drawings for river diversion works including diversion tunnels and cofferdam.
- g) To provide construction guidance and advising services for the construction works including diversion works during the period of the services.
- h) To provide technical transfer to DHPI engineers.
- i) To assist the DHPI in evaluation of bid, contract negotiations and award of contracts for procurement of construction equipment, electro-mechanical equipment and hydraulic steel structures.

#### **In-House Consulting Advisory Services for Construction Design**

Advisory services in preparation for the detailed construction design of civil works and hydraulic model tests, and in review and approval to be made by the DHPI of the contractor's detailed design of hydraulic steel structures and electro-mechanical works, construction planning, construction quality control, testing and commissioning including technical transfer to DHPI staff. The in-house advisory services will include:

- a) To assist the DHPI in preparation of construction detailed designs and drawings for civil works and architectural works on DHPI force account including design concepts, calculations with software and design manuals, etc.
- b) To assist in review and assessment on design of alternatives in the course of construction period.
- c) To advise on the necessary supervision of additional surveys and investigations to be carried out by the DHPI during construction period.
- d) To assist the DHPI in carrying out witness at contractor's workshop on the test inspections of hydraulic metal works and electro-mechanical equipment, and issuance of inspection/ test certification.
- e) To assist the DHPI in preparation of operation and maintenance manuals for dam, reservoir, appurtenant structures and powerhouse equipment.
- f) To assist the DHPI in preparation of comprehensive completion reports of the project implementation.
- g) To assist the DHPI to review, recommend and approve the contractor's shop and working drawings, planning, and quality control, supervision of erection and installation works.
- h) To assist the DHPI in planning, inspection, quality control and supervision of construction works.
- i) To assist the DHPI in final inspection, testing and commissioning of the Projects.
- j) To provide technical transfer to DHPI engineers.

#### **In-House Consulting Advisory Services for Construction Supervision**

Advisory services for construction works including technical transfer to DHPI staff. The in-house advisory services will include:

- a) To provide technical transfer to DHPI engineers through on-the-job training.
- b) To give advice on supervision of construction activities.

- c) To provide technical transfer and guidance to DHPI engineers in construction supervision and operation & maintenance of electro-mechanical equipment and plants.

### **Feasibility Studies of Selected Hydropower Projects**

#### **Scope of Work for Feasibility Studies:**

The work of the technical design teams and the environment and social assessment teams shall go hand in hand so that requirements from the environmental and social study can be fed into the project engineering design in order to mitigate, as far as possible, environmental impacts and social consequences of the development through improved design and layout of the projects.

The Consultant's scope of work for the feasibility studies shall include the following activities:

- Mobilization of study team including Consultant's experts and Client counterparts; establishment of communication and liaison lines with Client and other relevant authorities; establishment of project office at MOEP and agreement on field logistics etc.
- Collection of relevant studies, data and information; review of previous studies; screening and verification of new data and establishment of databank for project information on:
  - Market;
  - Existing infrastructure;
  - Hydrology and meteorology;
  - Topography and maps;
  - Geology, soils and materials;
  - Multipurpose aspects;
  - Environmental impacts and constraints;
  - Socio-economic conditions and constraints.
- Review and if necessary update of previous project formulation including:
  - Review of previous studies and plans;
  - Update of previous plans and preparation of preliminary project formulation based on all relevant data and information using upgraded planning parameters and criteria;
  - Field verification of project formulation and, if necessary, adjustment of plans to physical field conditions, new information, restrictions and requirements.
- Plan and oversee MOEP field investigations programme including:
  - Review and adaptation of existing field investigations programme;
  - Approve plans for investigation works to be carried out by MOEP or its subcontractors;
  - Assist MOEP in management of field investigation works;
  - Advise MOEP on laboratory testing of materials samples etc.
  - Assist MOEP in interpretation of field investigations results and adaptation of the field investigations programme to meet the needs of the project design.
- Confirm Project Layout including:
  - Update and revision of planning parameters;
  - Preparation of project layouts;
  - Field reconnaissance of alternative layouts;
  - Establishment of layout and of main project components, including field verification;
  - Obtain MOEP approval of project formulation, layout and main components and facilities;
  - Make any necessary adjustments of field investigations programme to accepted project layout.
- Carry out Environmental and Social Impact assessments of the two projects according to recognised international standards and in compliance with relevant Myanmar standards.
  - Environmental and Socio-Economic Baseline Study. Collected data must be gender disaggregated whenever applicable and appropriate.
  - Environmental Impact analysis and quantification of loss of environmental services.

- Socio-economic impact assessment of the hydropower projects through field investigations, surveys and interviews with stakeholders within and adjoining the project in a participatory process. The views and concerns of affected peoples shall be considered in the project planning and design in order to minimise consequences as far as possible.
  - The Consultant shall take part in public consultations/hearings with relevant stakeholders which will be arranged by the Client and/or Government.
  - Expected impacts shall be mitigated as far as possible through adaptations to the project layout and design. Where this is not possible, relevant compensation and mitigation measures fulfilling Myanmar requirements and international best practices shall be proposed and elaborated. This shall be in the form of an Environmental Management Plan and, if relevant, a Resettlement Action Program, including draft proposals for monitoring.
  - Prepare cost estimates of proposed environmental and social mitigation measures as feed-in to the project cost estimates.
- Prepare Preliminary Engineering Design of the Projects and optimize layouts and main project components including:
    - River transfer and diversion;
    - Regulation works;
    - Intake and waterways;
    - Power house and appurtenant facilities;
    - Transmission lines and substations;
    - Permanent site installations
- Establish dimensions and describe main and auxiliary project equipment and prepare performance specifications for the complete outfitting of the power plant; hydro-mechanical as well as electro-mechanical and auxiliary equipment including:
    - Valves and turbines;
    - Generators and switchgear;
    - Transformers, power cables, switchyard and substations;
    - Auxiliary equipment for monitoring, protection, control etc.
- Prepare Construction Schedules and Cost Estimates including:
    - Construction plans and implementation schedules;
    - Establishment of volumes of main items;
    - Establishment of unit prices of main items;
    - Establish of percentage additions needed to supplement main items for completion of the cost estimate;
    - Establishment of general cost components;
    - Prepare estimate of confidence levels, volumes, prices etc. and contingency factor levels;
    - Use existing database of suppliers costs or contact suppliers of electro-mechanical and other equipment to establish costs;
    - Prepare cost estimates for project implementation including: civil works, hydro-mechanical works, electro-mechanical works, transmission works, environmental and resettlement and social mitigation costs, land acquisition/rights of way, field investigations, engineering and management costs, and contingencies;
    - Prepare disbursement schedules based on the cost estimates and implementation schedules.
    - Establish estimates of annual operation costs, maintenance costs, rehabilitation and administration costs.
    - Establish relevant market value of electricity/available tariffs/PPA agreement tariffs;
    - Establish annual income streams from sales of electricity after correcting for losses, etc.
- Prepare Economic and Financial Analysis with cash flow tables showing project costs and income streams over the project lifetime including:
    - Cash flow for economic analysis;
    - Analysis of financial terms and equity and debt service;



- Cash flow for financial analysis;
- Economic and financial tests and establishment of Economic Internal Rate of Return (EIRR) and Financial Internal rate of Return (FIRR) for the project base case;
- Sensitivity analyses to demonstrate the effects of changes in primary parameters;
- Least cost project considerations;
- A statement on the economic and financial feasibility of the projects.
- Preparation of details for a Definite Design Study of the projects including investigation programme and cost estimate for Definite Design Study.

## **REPORTING**

### **In-House Consulting Reporting:**

All reports are to be submitted in both hardcopy and digital copy. Digital copy files shall be in original format files as well as in PDF format.

The Consultant will produce and submit the following reports:

- 1) Monthly and Quarterly progress reports (including quarterly Technical Transfer Reports)
- 2) Half-yearly coordination meeting reports.
- 3) Completion report of the In-House Consulting Services

The Consultant shall collaborate with DHPI Engineers in preparation of the following reports in English during the course of the In-House Consulting Services:

- 1) Feasibility Study Reports as detailed under the description of the feasibility studies
- 2) Reports on additional investigation works
- 3) Bid documents with supporting drawings
- 4) Pre-qualification evaluation reports, if pre-qualification is carried out.
- 5) Feasibility and basic design reports.
- 6) Detailed engineering design reports and drawings.
- 7) Inspection reports of shop inspections and tests before shipment.
- 8) Completion reports and drawings
- 9) Compilation of contractor's operation and maintenance manual.

### **Reporting and Deliverables-Feasibility Studies:**

All reports are to be submitted in both hardcopy and digital copy. Digital copy files shall be in original format files as well as in PDF format. The Consultant will produce and submit the following reports:

- ***Inception Report*** including: Main findings from the Inception Period and recommendations for any changes to the work plan and time schedule for the study. *(2 months after start of contract)*
- ***Quarterly Progress Report:*** content to be agreed with the Client. *(every 3 months)*
- ***Draft Feasibility Study Report & EIA/SIA Report*** including: Executive Summary; Chapters on each aspect of the study including alternative scenarios and conclusions; Appendices; Relevant freestanding technical reports such as Geotechnical/Geological Report, etc. *(12 months after start of contract)*
- ***Final Feasibility Study Report & EIA/SIA Report:*** As in Draft Report, including a consideration and where necessary inclusion of the effects of the Client's comments to the draft Report. *(14 months after start of contract)*

### **Capacity Building of DHPI through Technical Transfer:**

The scope of services for technical transfer will include the following activities aimed at DHPI engineers:

- a) To provide technical guidance to the DHPI engineers through on-the-job training,
- b) To provide inspection of on-going or existing hydropower projects in Norway,
- c) To provide the latest engineering skill or knowledge from Norway.

### **In-House Consultant Coordination Meetings**

The in-house consultancy coordination meetings will be held in Myanmar twice a year to discuss the important site-oriented technical issues and other critical issues. The meetings will be organized by the members of MOEP, DHPI, the Consultant and NVE.

### **Technical Steering Committee Program**

The Consultant shall organize a Technical Steering Committee composed of experts in the field of hydropower planning, design and construction and related environmental aspects.

The Committee will provide appropriate technical advice to the assigned experts and DHPI on items including plant layout and scale, major structures design and construction methods, considering the local conditions of the Projects. The members of Technical Steering Committee are to be selected from various organizations (preferably including DHPI) and academic authorities. It is expected that the Committee will meet once a year in Norway.

### **The Consultant's Personnel and Work Schedule:**

The Consultant shall set up a schedule of experts and support personnel for the execution of the work and indicate work inputs in Myanmar and in the home office in the form of a bar chart indicating the duration of the time to be worked in Myanmar and in the home office together with totals of Myanmar and Home Office person-month estimates and numbers of international travels for each of the consultants personnel. The Consultant shall also indicate the inclusion of MOEP personnel in the study team in the same manner. Requirements to the minimum qualifications of the Consultant's Personnel are given in the Request for Proposals.

- Estimated quantity and duration of In-House Consultants: 60 person-months over a period of 2 years.
- Estimated quantity and duration of Feasibility Study Work: Estimate of person-months to be provided by Consultant.

### **Services and Facilities to be provided by DHPI/MOEP:**

The following services and facilities will be provided by DHPI/MOEP:

- Accommodation in Nay Pyi Taw: local transportation in Nay Pyi Taw and to/from project sites;
- Myanmar visa assistance;
- Office accommodation in Nay Pyi Taw and/or at project sites with suitable facilities including internet access;
- Security of the Consultant's personnel in Myanmar.
- Technical field investigations and surveys.

### **Location and Mode of Work:**

The Services shall be carried out for the DHPI in their offices in Nay Pyi Taw and at the hydropower project sites in Myanmar. In addition time may be spent in the Consultant's home office and/or in other relevant places.

The work of the technical design teams and the environment and social assessment teams shall go hand in hand so that requirements from the environmental and social study can be fed into the project engineering design in order to mitigate, as far as possible, environmental impacts and social consequences of the development through improved design and layout of the projects.

The Services shall be carried out by the Consultant's experts working in an integrated team with the DHPI engineers who shall be actively engaged by the Consultant in the study work. Technical Transfer shall be achieved through on-the-job training, both in terms of assignment for DHPI engineers in the Consultant's Home Office with work on the project, and in the design office in Myanmar. The requirements of the donors in respect of measurement and documentation of Technical Transfer shall be followed.

The activities of the Consultant's team for the Services will be coordinated with the Director General of the DHPI and DHPI's Design Branch, and with the NVE Project Director.

**Selected Reference Documents:**

- ***DRAFT REPORT, In House Engineering services for The Ministry of Electric Power (MOEP), Myanmar. SUBJECT: 110 MW Tha-htay hydropower plant in western Myanmar.*** Multiconsult, CLIENT: NVE, DATE: April 22, 2014/01, DOCUMENT CODE: 416618-RIG-RAP-001
- ***Completion Report, In-House Engineering Services for DHPI,*** NEWJEC Inc., March 21, 2012 to March 20, 2014
- ***Coordination Meeting Reports,*** MOEP & NEWJEC Inc.
- ***Upper Keng Tawng Hydropower Project, Engineering Report, Volume 1-Main Report, Volume 2-Appendix;*** Design Branch (DHPI/MOEP) & NEWJEC (Japan), March 2014

## **Annex 2 – Contract conditions**

Reference: FIDIC Client/consultant Model Service Agreement (White Book), 4<sup>th</sup> Edition, 2006.

The following clauses will be part of the contract:

Particular conditions in the contract

B. Additional Clauses

### **For Liquidated Damages in Case of Delay**

If the agreed date of delivery of the final report is not complied with, and this is not caused by force majeure or circumstances on the part of the Client, there is a delay on the part of the Consultant that triggers liquidated damages.

The liquidated damages shall accumulate automatically. The liquidated damages amount to 0.15 percent of the total consideration payable for the Contracted Items (the contract price), excluding Value Added Tax, for each calendar day of delay, but limited to a maximum of one hundred (100) calendar days.

The Customer shall not have the right to terminate the Agreement for breach for as long as the liquidated damages continue to accumulate. However, the time restriction shall not apply in the case of wilful misconduct or gross negligence on the part of the Contractor or anyone for whom it is responsible.

If only parts of the agreed deliverables are delayed, the Contractor may request a reduction in the liquidated damages proportional to the ability of the Customer to utilise the part of the deliverables that has been delivered.

### **Remuneration and Payment**

#### **Terms for implementation of Electronic Trading Format (EHF):**

The submitting of electronic invoices is to be done by ways/methods of communication as whenever decided by the Norwegian Government Agency for Financial Management (DFØ).

The Consultant shall be noticed 6 months prior to any necessary change in such ways/methods of communication.

## Annex 3 - HMS-egenerklæring (For English version see other document)

Egenerklæring om helse, miljø og sikkerhet (HMS)

Denne bekreftelsen gjelder:

Virksomhetens navn		Organisasjonsnr/ Fødselsnr	
Adresse		Land*	
Postnummer		Poststed	

Jeg bekrefter med dette at denne virksomheten arbeider systematisk for å oppfylle kravene i helse-, miljø- og sikkerhetslovgivningen og ved det tilfredsstillende kravene i forskrift om systematisk helse-, miljø- og sikkerhetsarbeid i virksomheten (internkontrollforskriften).

Jeg bekrefter at virksomheten er lovlig organisert i henhold til gjeldende skatte- og arbeidsmiljøregelverk når det gjelder ansattes faglige og sosiale rettigheter. Jeg aksepterer at oppdragsgiver etter anmodning vil bli gitt rett til å gjennomgå og verifisere virksomhetens system for ivaretagelse av helse, miljø og sikkerhet.

\_\_\_\_\_  
Dato

\_\_\_\_\_  
Daglig leder

Jeg bekrefter med dette at det er iverksatt systematiske tiltak for å oppfylle ovennevnte krav i helse-, miljø- og sikkerhetslovgivningen.

Ingen ansatte

\_\_\_\_\_  
Dato

\_\_\_\_\_  
Representant for de ansatte

\*For utenlandske oppdragstakere gjelder følgende: Jeg bekrefter med dette at det ved utarbeidelse av tilbudet er tatt hensyn til helse-, miljø- og sikkerhetslovgivningen som følger av forskrift om systematisk helse-, miljø- og sikkerhetsarbeid i virksomheter (internkontrollforskriften), fastsatt ved kgl. res. 6. desember 1996 i medhold av lov 17. juni 2005 nr. 62 om og arbeidsmiljø, arbeidstid og stillingsvern mv. Jeg aksepterer at oppdragsgiver etter anmodning vil bli gitt rett til å gjennomgå og verifisere virksomhetens system for ivaretagelse av helse-, miljø- og sikkerhetsarbeid.

## **Annex 4 – Self declaration on Salary and working requirements for personnel under service contracts with Norwegian public institutions**

With reference to the Circular dated 16 July 2005 from the Ministry of Administration and Reform, Norwegian public institutions shall ensure that the use of personnel engaged under service contracts complies with ILO Convention No. 94 regarding work clauses to guarantee equal working conditions regardless of nationality.

The provider shall therefore ensure that its own employees and employees of any sub-contractors enjoy the salaries and working conditions laid down in tariff agreements, regulations or whatever normally applies to the place and work in question. The manager of the entity is responsible for ensuring compliance with this regulation.

All contracts that the provider enters into that cover work under this contract shall include these provisions.

If the provider fails to comply with these provisions, the Client is entitled to retain part of the payment until compliance is documented. The amount to be withheld shall equal twice the amount saved by the provider.

The provider shall upon request present documentation regarding the salaries and documentation used.

I hereby confirm that systematic measures have been implemented to meet the above requirements in connection with salary and working requirements for personnel under service contracts with Norwegian public institutions.

Place: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: : \_\_\_\_\_

## Annex 5 CV format

### FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

Proposed Position: \_\_\_\_\_

Name of Firm: \_\_\_\_\_

Name of Staff: \_\_\_\_\_

Profession: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Years with Firm/Entity: \_\_\_\_\_ Nationality: \_\_\_\_\_

Membership in Professional Societies: \_\_\_\_\_

\_\_\_\_\_

Detailed Tasks Assigned: \_\_\_\_\_

\_\_\_\_\_

#### **Key Qualifications:**

*[Give an outline of staff member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by staff member on relevant previous assignments and give dates and locations. Use about half a page.]*

\_\_\_\_\_

#### **Education:**

*[Summarize college/university and other specialized education of staff member, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]*

\_\_\_\_\_

**Employment Record:**

*[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of assignments. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]*

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**Languages:**

*[For each language indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]*

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**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications, my experience, and me.

\_\_\_\_\_ Date: \_\_\_\_\_  
*[Signature of staff member and authorized representative of the firm] Day/Month/Year*

Full name of staff member: \_\_\_\_\_

Full name of authorized representative: \_\_\_\_\_



## **Annex 6 Financial Proposal form**

### **Standard Forms**

- A. Financial Proposal submission form.
- B. Summary of costs.
- C. Breakdown of price per activity.
- D. Breakdown of remuneration per activity.
- E. Reimbursables per activity.
- F. Miscellaneous expenses.

## A. FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: [Name and address of Bank]

Ladies/Gentlemen:

We, the undersigned, offer to provide the consulting services for [Title of consulting services] in accordance with your Request for Proposal dated [Date] and our Proposal (Technical and Financial Proposals). Our attached Financial Proposal is for the sum of [Amount in words and figures]. This amount is exclusive of the local taxes.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e., [Date].

Commissions and gratuities, if any, paid or to be paid by us to agents relating to this Contract execution, if we are awarded the Contract, are listed below:

Name and Address of Agents	Amount and Currency	Purpose of Commission or Gratuity
_____	_____	_____
_____	_____	_____
_____	_____	_____

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature:  
Name and Title of Signatory:  
Name of Firm:  
Address:

## B. SUMMARY OF COSTS

Costs	Currency(ies) <sup>1</sup>	Amount(s)
Total Amount of Financial Proposal		

---

<sup>1</sup> Maximum of three currencies plus the local currency.

### C. BREAKDOWN OF PRICE PER ACTIVITY

Activity No.: _____	Activity No.: _____	Description: _____
Price Component	Currency(ies)	Amount(s)
Remuneration		
Reimbursables		
Miscellaneous Expenses		
Subtotal		_____

**D. BREAKDOWN OF REMUNERATION PER ACTIVITY**

Activity No. _____		Name: _____		
Names	Position	Input <sup>2</sup>	Remuneration Currency(ies) Rate	Amount
Regular staff				
Local staff				
Consultants				
Grand Total				_____

---

<sup>2</sup> Staff months, days, or hours as appropriate.

## E. REIMBURSABLES PER ACTIVITY

Activity No: \_\_\_\_\_

Name: \_\_\_\_\_

No.	Description	Unit	Quantity	Unit Price In	Total Amount In
1.	International flights _____	Trip			
2.	Miscellaneous travel expenses	Trip			
3.	Subsistence allowance	Day			
4.	Local transportation costs <sup>3</sup>				
5.	Office rent/accommodation/ clerical assistance				
	Grand Total				_____

<sup>3</sup> Local transportation costs are not included if local transportation is being made available by the Client. Similarly, in the project site, office rent/accommodations/clerical assistance costs are not to be included if being made available by the Client.

## F. MISCELLANEOUS EXPENSES

Activity No. \_\_\_\_\_

Activity Name: \_\_\_\_\_

No.	Description	Unit	Quantity	Unit Price	Total Amount
1.	Communication costs between _____ and _____ (telephone, telegram, telex)				
2.	Drafting, reproduction of reports				
3.	Equipment: vehicles, computers, etc.				
4.	Software				
	Grand Total				_____

[Country]

[Project Name:]

[Title of Consulting Services]

**STANDARD REQUEST FOR PROPOSALS**

RFP #

**INFORMATION TO CONSULTANTS**

**BREAKDOWN OF AGREED FIXED RATES<sup>4</sup>**

[Currencies: \_\_\_\_\_<sup>5</sup>]

Consultants	1	2	3	4	5	6	7
		Social				Away from Headquarte	

<sup>4</sup> This model form is given for negotiation purposes only. It is not part of the proposals (technical or financial).

<sup>5</sup> If different currencies, a different table for each currency should be used.

Name	Position	Basic Rate <sup>6</sup>	Charge (__% of 1)	Overhead (__% of 1)	Subtotal	Fee (__% of 4)	rs Allowance (__ % of 1)	Total Agreed Fixed Rate
Country Assignment								
Home Office								

Signature of Consultant: \_\_\_\_\_

Date: \_\_\_\_\_

Authorized Representative: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

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<sup>6</sup> Per month, day, or hour as appropriate.